

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII.

Chicago, Ill., April 26, 1882.

No. 17.

THE AMERICAN BEE JOURNAL

Published every Wednesday by

THOMAS C. NEWMAN,

EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.

At \$2.00 a Year, in Advance.

WEEKLY—(52 numbers) \$2 a year, in advance.
Three or Six Months at the same rate.

Any person sending a club of six is entitled to an extra copy (like the club) sent to any address desired. Sample copies furnished free.

Entered at Chicago post office as second class matter.

TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.....	257
Removal.....	257
Foreign Buyers in Our Markets.....	257
Priority in the Use of Sections.....	258

Among Our Exchanges—

The Ariel of the Spring.....	259
Artificial Swarming in 1762.....	259
Watching the Bees.....	259
Grafting Wax.....	259

Correspondence—

Producing Comb Honey—No. 5.....	260
Odds and Ends.....	260
The Hive I Use and Prefer.....	261
Light or Dark Colored Italians.....	261
Chemical Properties Required in Soil.....	262
Bee-Keeping in Sweden.....	262
Bees' Tongue Register.....	263
Improvement in Italian Bees.....	263

Convention Notes—

Local Convention Directory.....	264
Saunders Co., Neb., Convention.....	264
Eastern Michigan Convention.....	264

Selections from Our Letter Box—

Cool Yet.....	264
Frost and Swarms.....	265
Queen Feeding a Drone.....	265
Loss about Ten per Cent.....	265
Prepared for Dividing.....	265
Water! Water!.....	265
Not very Plain.....	265
Fruit Blossoms all Killed.....	265
Jubilant.....	265
The Golden Bee Hive.....	266
Planting for Honey.....	266
Grateful.....	266
Honey Store-Room.....	266
Universally Cold.....	266
Pollen.....	266
Bees Swarming.....	266
Removing Queen Cells.....	267
Plenty of Bloom.....	267
Clover Uninjured.....	267
Bees at the College.....	267
Harmless.....	267
Cheerfulness Prevails.....	267
Flowers on Every Side.....	267
Cyprian Bees.....	267
Bee Pasturage.....	267
Gnawing Off Combs.....	267
Prospect of Honey Harvest.....	267
Bee Stings.....	267
Wintering in Cellar.....	267
Building Up.....	267



Removal of Our Office.

It will be observed that our number is now changed to 925 West Madison street, Chicago, Ill., just one block east of our former location. As our mail is so very large, the change will make no confusion, for the postal carriers are quite familiar with it, that whether addressed to one number or the other, letters will reach us just as promptly.

In 1873, nine years ago, when we purchased the BEE JOURNAL, a small room on the third floor was all that was required. In our new location, all on the first floor, the BEE JOURNAL and our Son's supply establishment (which is also moved to obtain increased facilities) occupies 23 times as many* square feet of floor surface as in 1873.

The Postoffice Department has created a new branch postoffice within a few doors of our new location which will also be very convenient both for our patrons and ourselves.

We have a telephone connecting us with every part of the city, and should any of our subscribers be in the city, they can step into almost any store and talk with us, even if they cannot come and see us.

Foreign Buyers in Our Markets.

It will be seen, by reference to the letter, from Mr. J. E. Pleasants, Anaheim, Cal., on page 267 of this issue, that foreign buyers are already in our markets, gathering up the prospective honey crop. He says: "There are parties here now making very

liberal offers for the coming crop." This we foresaw months ago, and predicted it in the BEE JOURNAL as an inevitable event; and perhaps in this connection we may congratulate the bee-keepers of California on their meager honey crop last season, which has had a tendency to advance prices higher than could have been done with a plethoric market. It will be a matter for self-reproach, if the apiarists of California do not hereafter find a remunerative market at their very doors for every pound of honey they have to dispose of, instead of being obliged to pay excessive transportation rates to bring their honey into competition with the product of a vast country as generous as their own in production, and quite its equal in quality, on this side of the mountains. The question is no longer—Where will we find a market? but, How best can we secure the production? Again do we suggest the careful and unprejudiced consideration of the bee pasturage problem. Every bee-keeper in America should settle the question for himself, from actual investigation, whether he can prolong the yield, or secure a continuous honey flow. He should know from actual, personal knowledge, what is best for his climate, soil, and convenience. For many honey-producing plants now is the time to procure the seeds and deposit them in the ground. Three or four liberal patches, planted this spring, may insure success in the future.

The Bees' Tongue Register which we noticed in a late number of the BEE JOURNAL as being received from Mr. J. H. Martin, may be seen illustrated on page 273 of this Journal, to which we would call attention. It looks pretty but as we have had no chance to test it, we cannot speak of it practically.

Priority in Use of Sections.

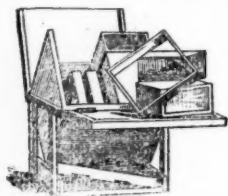
Mr. Friedemann Greiner, Naples, N. Y., writes us as follows:

In one of the last numbers of the *Bienen Zeitung*, Herr Grifflav claims to have invented the section box before it was used in America. Now, if the invention was made by an American before the year 1875, and this is stated in the *AMERICAN BEE JOURNAL* of 1874 or 1875, please inform me, as I was not a reader of the *JOURNAL* then.

There were several patents taken out for sections prior to the date mentioned above, many of which were described and some illustrated in the *AMERICAN BEE JOURNAL*, from which we select the following:

April 6th, 1852, Mr. E. W. Phelps received a patent for section boxes in frames, which was twelve years prior to the date given by our German contemporary.

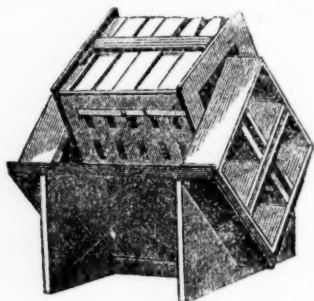
Dr. A. V. Conklin, of Bennington, O., patented his summer and winter bee hive Oct. 20, 1868, which contained



Conklin Hive and Sections.

sections for surplus comb honey, and which was described and illustrated in the *AMERICAN BEE JOURNAL* for April, 1869, page 187.

In our paper for June, 1870, Dr. J. M. Price, of Buffalo Grove, Iowa, illustrated and published, on page 257,



Price Hive and Sections.

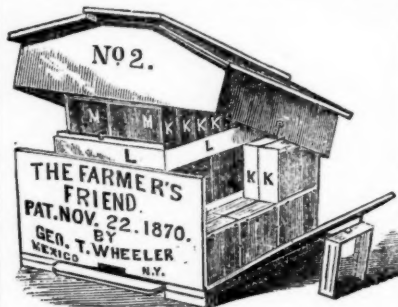
his patent bee hive, the surplus arrangement of which he describes as follows:

The surplus honey can be had in boxes or sections, and can be taken from the top or side of the hive.... The surplus honey sections are in close connection with the brood chamber and with one another.... The sections can be used to the full capacity of the

hive or of the bees to fill them, and the bees can be forced to work on any number at once, thereby greatly increasing the yield.

He claimed that this invention was destined to mark a new era in profitable bee-keeping.

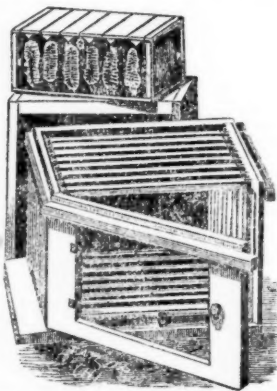
On Nov. 22, 1870, Mr. Geo. T. Wheeler, of Mexico, N. Y., received a patent on tin separators, to be used in connection with one-comb honey sections. Mr. Wheeler remarked at that time, that he did not claim to be the



Farmers' Friend and Sections.

inventor of section boxes, but had commenced his experiments with separators as early as 1867, which is corroborative proof that sections were in use before that time—probably many years before.

Messrs. Reynolds & Brooks, of Lexington, Ill., patented the "farmers' bee hive," March 28, 1871. This was largely advertised and illustrated in



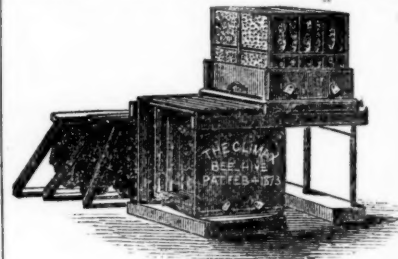
Reynolds & Brooks Hive and Sections.

the *AMERICAN BEE JOURNAL* of May, 1873, and the cut used of the hive at that time shows the sections in place on top.

On January 7, 1873, Messrs Barker & Dicer, of Marshall, Mich., patented a "dovetailed sectional honey box, made with two wide and two narrow pieces so arranged that they form openings between each section." The narrow pieces are to allow a free entrance for the bees, and also to facili-

tate their use in tiering up. This is the dovetailed section in use at the present day.

The "Climax bee hive," patented in 1873, was advertised in this paper in



Climax Hive and Sections.

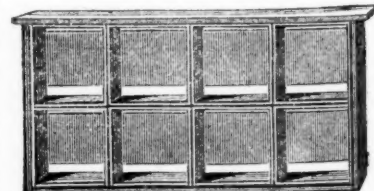
the April number, 1875, and illustrated with a rack of sections sitting on top.

Thus we have shown that sections for surplus comb honey were in use in America for fully thirty years, as can be substantiated by the official records in the Patent Office at Washington, D. C. How long a time prior to that date they may have been in use, we



Nailed and Glassed Section.

have no means at hand of determining—but probably long previously. It is notable that among the first devices for the purpose of securing small packages of comb honey, was substantially the prize section of the present day, and which has quite recently become so popular in Germany, England and elsewhere. The case or broad frame, to hold the sections in the brood chamber or super, was also



Case of to-day, with 4x4 Sections.

used in connection with some of the hives, and will be seen illustrated in some of the cuts.

The illustrations given in this article (except two last) are printed on the identical cuts used in the *BEE JOURNAL* at the dates mentioned above. The broad frame or case of to-day we illustrate to show, by comparison, that it is only a modification of those long preceding it, and it is almost a counterpart of that used by Dr. Price.



MISCELLANEOUS.

Apiculturist.

The Ariel of the Spring.

ALBERT F. KERCHEVAL.

Tireless toiler, with thy wing,
Winnowing soft the breath of spring,
Darkling doubt is over, sing!

Sing of bright and summer hours,
Sing of dreamy summer bowers,
Sing of fragrance-haunting flowers,

Laden with their nectar sweet,
Glad that wait the lips to greet,
As when trembling lovers meet;

Sighing, beck'ning everywhere—
On the mountain slope afar
Lifting high its mighty bar,

In the valley, on the plain,
Nestling 'mid the cereal grain,
Kiss'd by sun and dew and rain,

Wreathing Nature's smiling face,
Bending with their tender grace
Over each lone vacant space.

O, thou arial spirit fleet,
Flitting swift from sweet to sweet,
Every flowery queen to greet,

Sipping nature's fairy wine;
O, that thy sweet life were mine;
Even brief and bright as thine!

One sweet revel all the hours
'Mid the dreamy, tender bowers,
Then to die 'mid dying flowers!

Los Angeles, Cal., March 20, 1882.

Artificial Swarming in 1762.—Mr. J. M. Hicks, in the *Grange Bulletin*, gives the following historical item:

Swammerdam, who wrote in the latter part of the seventeenth century, mentions a bee-keeper, who knew the art of producing queen bees at pleasure, and of securing thereby four times as many swarms annually as were usually obtained by the old plan of natural swarming. In 1762, Graefwell, in his "Approved Bee Culture," gave directions for making artificial swarms and dividing colonies, and Schirach published a special treatise on the subject in 1770, in which he first announced the fact, previously known to but few, that bees are able to raise a queen from worker brood. The practice seems to have been of but little success, as many facts having an important influence were then unknown, and the hives then in use were ill-adapted to the business. The elder Huber and others of his time, made a success of artificial swarming, when they developed the movable-frame system and made their important discoveries in the physiology of the bee. Their practice, though, was necessarily imperfect, and was seldom

practiced successfully, except by the most expert and well-informed apia-rists. Since that time rapid advances have been made in this branch of bee-culture. It would require a volume to describe all of the different modifications of artificial swarming, with the advantages and disadvantages of each. The reader can consult the works already published, in most of which this subject has been extensively discussed.

Watching the Bees.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following account of an interview between herself and a neighbor.

"I couldn't find you in the house, and I suppose if I want to see you I shall have to come to the bee-yard until October."

"Isn't it a nice place, this delightful weather?—take this rustic seat and watch the bees, sailing in loaded."

"My grandmother used to keep bees in the old country, and in the fall she would dig a hole in the ground, make a little fire of sticks dipped in brimstone, and set her hive over it, and in a few moments all the bees would be dead. Her hives were not like yours, they were straw skips, just like you see in pictures. Oh! look at the bees with their legs covered with wax. How I would like to see one load his feet."

"That isn't wax, Peggie, but pollen, what we call bee-bread—the bees feed their young with it. Those that drop down so heavily, are either gathering honey or carrying water."

"Indade, sometimes I'm afraid of me life, when I go to the well after water, there are bees in the pump spout and in the gravel around it—they are not always particular about what they drink, for sure haven't I seen them sucking the manure piles after a rain, and when Tim Shay plastered his house, they were in the mortar bed ating it, and the boys killed a dale of 'em, pelting 'em and spatting 'em into the mortar with shingle paddles. I told the wicked craythurs to stop it, but not a bit would they bide my bidding."

"People think they must have some badly tasting stuff called medicine, or bitters like tansy and whisky in the spring, to regulate their digestion, and the bees are only following their example. I've known doctors to prescribe lime water for a little baby, and bees love salt and ammonia, and who knows but that they may need lime, if they haven't any bones."

"What have you that sack tied to the limb of that tree for, with a stick in its mouth to keep it open?"

"Sugar was brought home in it, and as it was pretty damp; it stuck to it so much that it could not be used for anything else, and I hung it there for the bees to clean it up. It is as clean and free from stickiness now as a new one. I put out some closet shelves, that had honey on them, that had oozed out of some broken boxes during the winter, for the bees to clean up, and had a lively time in consequence of it. Honey excites

them more than sugar, and when it was gone they hunted for more. I had left a window open upstairs, and there were boxes of honey in the room. Hearing a buzz and a roar, we found that apparently a million bees were flying in and out of that window. I drove out what I could with a smoker, but had to put the window down, as so many came back, and it was two days before I got them all out. All this trouble on account of carelessness."

"Is that barrel of sugar, that the groceryman is rolling in, for the bees?"

"Yes, I'm feeding every colony I have. As I've not enough feeders to go around, I'm using all sorts of things—here is an old sugar bowl with one ear broken off, peach cans, Mason's jars, etc. I make little sacks of thin muslin, and tie them over the can, so that as fast as the syrup is eaten, the sack sinks with it, and not a bee will get drowned. I fill this large pitcher with sugar, pour in boiling water, and stir it well, and feed it warm; of course, not hot enough to burn them."

"Indade, ma'am, you've a dale of trouble with your baes."

"Yes, we can't have anything without work. I suppose St. Patrick had hard work to rid Ireland of frogs and snakes, but he succeeded."

"Won't you plaze give me a little honey for Paddy, he has a bad cough. God bless you ma'am."

Grafting Wax.—The *American Agriculturist* for May, gives the following receipt:

Rosin, beeswax, and tallow, are the essentials. Some use equal parts by weight of these; others prefer, as warm weather approaches, more rosin and less tallow. A good recipe is rosin 2 lbs., beeswax 1½ lbs., tallow 12 ounces. These should be melted well together over a gentle fire, and stirred as the mixture cools. It is most conveniently used upon strips of cloth. Any old calico or muslin that will tear readily, may be torn into strips 2 inches wide, made into balls and soaked in the melted wax, until thoroughly saturated. We prefer to roll the cloth upon a short stick, to afford a handle. If paper is to be used, the warm wax is spread with a brush upon one side of this Manila paper. Some grafters prefer a wax made with raw linseed oil, using a pint of oil instead of a pound of tallow.

The Eastern New York Bee-Keepers' Union will hold their 10th Semi-Annual Convention on Tuesday and Wednesday, May 2d and 3d, 1882, at the parlors of the Hotel Augustan, Cobleskill, Schoharie County, N. Y., at 10 o'clock a. m. All interested in the bee business are invited to attend.

W. L. TENNANT, *Pres.*C. QUACKENBUSH, *Sec.*

The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11 1882. T. BROOKINS, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Producing Comb Honey—No. 5.

G. M. DOOLITTLE.

Having the bees all in, and swarming all done up, the next work is to manipulate the bees and boxes so as to get the largest possible yield from them. Now do not understand that I never have a swarm issue after I have all swarming done (as it should be when the honey harvest is at its best), for such is not the case. Some of the first swarms will frequently swarm again, or some of those which were moved so as to draw off the old bees, getting populous again, may swarm; but in such instances they are put back where they came from, after extracting every particle of honey from the brood nest, and cutting out all the queen cells. Still, as a rule, not many swarms issue after all are prepared as I have described. If a colony is determined to swarm after this treatment, I generally take off the boxes and put on a second story, filled with empty combs, in which case they will generally go to work with a will. If I cannot make one plan work, I try another; until I strike one that will, and if a colony is bent on swarming and will not work in a hive where the lower combs are filled with brood, I take all the brood away. Colonies having the swarming fever, will not do much of anything but swarm, unless some material change is made with the interior of the hive more than the cutting out of queen cells, and the sooner this fever is broken up (when it comes during a yield of honey) the better the results. However, but few bother in this way, as most of them settle down to business and stick to it after the swarming proper is over.

After the colonies are all made up, I see that all nuclei have the means of getting a laying queen as speedily as possible; then I am ready to go over the yard for box honey. In doing this, I remove the cap and unkey the cases, when they are pried apart a little in the center, blowing in a little smoke to make the bees run out of the way. As the bees clear aside I can see down the flat side of the sections and, if any are capped down to the bottom, they are ready to come off. If ready I pry the opposite side of the case lose, when the cases are spread apart a little and the one having the finished sections in it, is lifted out. I now smoke the bees off, in the manner I described on page 257 of the BEE JOURNAL for 1881, to get the bees off the brood combs. They can be nearly all shaken off, except a few behind the tin separator.

I then take the sections out of the case and place them in boxes which will hold 18 prize sections or 24 of the 1½ lb. sections. These boxes have

nails driven in the bottom so as to project ¼ inch above the bottom of the box, and are so arranged, that, by beginning at either side, the nails strike close to one edge of the bottom of the sections, so their weight will keep them pressed close to that side, and then they will not be liable to tip over. The object of these boxes, are first, to prevent killing bees should there be a few not shaken off; secondly, to prevent the sections getting daubed, should any of the combs get bruised, so as to leak honey; and, thirdly, they can be packed nicely on a wheel-barrow so as to be wheeled to and from the honey house, as well as being handy to carry from the wheel-barrow into the honey room. Before going to the bee yard these boxes are filled with empty sections, having starters all ready for use.

When the full sections are all out of the case it is filled with empty ones, and put down at the side of the hive when more are taken in the same way, if any more are ready to come off. After taking all those finished, the rest are placed close together, and enough partly-filled sections from the sides are raised to the top (by lifting cases, sections and all) till the number wanted is reached, when the cases filled with empty sections are placed at the sides, in place of those raised to the top, when the hive is closed. I now place a small flat stone on top of this hive, that can be seen from any part of the yard, which indicates that I have taken the honey from it. Thus I keep on till the whole yard is gone over.

If the yield of honey is still good I work in the same way, going over them again a week later, except that this time the little stone is taken off and placed beneath the bottom board of the hive. By using this stone I can see, by glancing over the yard, just how far I have been each time, and the hives which have not been looked at.

As a rule, when I am ready to go over the yard again, the basswood yield is drawing to a close, so I work accordingly, by narrowing up the surplus room. As the cases are raised from the sides at this time, the follower is moved up, so as to shut the bees out of ½ the side cases, unless in case of some extremely populous colony, which is treated the same as before. By this means the working force is thrown into a more compact space, the result of which is, a tendency toward completing the sections they have commenced work in, rather than building comb in more. After another week I go over the whole yard again, this time shutting the bees out of the side boxes entirely, which throws the full force of bees into the top boxes, and, although the honey season may now be over, by getting this force of bees all together they will cap the partly-filled boxes, where they otherwise would not. This gives sections lighter in weight, but makes much more of our crop in a salable form.

At the end of another week, all the white honey is ready to come off the hives, and as a rule, my honey harvest

is over. In seasons when buckwheat does yield a surplus, I seldom let the bees into the side boxes again, but keep them shut in the top cases.

Thus I have given you the way I proceed to get comb honey. By going over the yard once a week, the honey comes off with a whiteness of comb not attainable when left on the hives till the end of the season, as some do; and also the bees are kept working to their utmost capacity. Those who think they have a better way of proceeding, will doubtless think Doolittle does not adopt the best plan to get comb honey. I will simply say that an average of 92 lbs. each year, for each colony, for the past 9 years, is all I have to recommend this plan. This ends the production part of this series of articles.

Borodino, N. Y.

For the American Bee Journal.

Odds and Ends.

O. CLUTE.

Last fall I promised to report this spring my method of wintering, and its success. The winter has been so favorable that it required no skill to bring the blessed bees through all right. He who could not winter with success the past winter must be a poor bee-keeper indeed. A few of my bees were in chaff hives on the summer stands. All these have come through in good condition. The larger part of my bees were in simplicity hives in the cellar. All these are in good condition. Not a colony has been lost either out-door or in the cellar.

The first pollen was gathered Feb. 16. After several days of warm, beautiful weather the maples opened on that day, and the bees had a happy time; but the next day brought a frost that nipped the maples, and kept the bees in. Some of the coldest weather of the season followed. Since the middle of March the bees have been flying more or less every week. Maples, elms, cotton-woods, and box-elders have given pollen and some honey. To-day is clear and beautiful, with a still air, and warm sunshine. Willows are open, and I think some of the cotton-woods. The bees are very active, carrying pollen of a brilliant yellow, which I think they get from willows, and some of a darker color which I suppose comes from cotton-woods.

Although the winter has been very open, the clover seems not to have suffered. Already the white clover is pushing up its green leaves everywhere, and promises to be very abundant. The fruit trees are well laden with fruit buds, and if no frosts prevent, will give an abundant bloom. On the nights of the 10th and 11th inst. we had freezing weather, which is thought to have been a serious injury to the early cherries, but it is hoped that other fruits were not far enough advanced to be injured.

I hope other bee-keepers are more fortunate than I am in finding workmen who will make hives exactly right. The average workman seems

to have no ability to conceive that $\frac{1}{8}$ or $\frac{1}{4}$ of an inch is of any account in making a bee hive. They say that you are only "fussing" when you insist that every measurement shall be exact. I have been having a large number of new hives made, and have had my patience severely tried. I gave the workman at the factory a pattern hive which was just right. He rather elevated his nose when I urgently directed him to be sure to follow the pattern in cutting out stuff. But he made an exasperating blunder. I paid the wages of an expert carpenter to a man to nail hives, because I wanted the job done well and quickly. I showed him how, and then left him to do the work, and he did much of it badly. These workmen, and many days of cold or stormy weather, prevented me from sending bees promptly to some customers; but all will now go, and I hope will be all right.

Iowa City, April 17, 1882.

California Apiculturist.

The Hive I Use and Prefer.

WM. MUTH-RASMUSSEN.

After leaving Los Angeles, Cal., I commenced bee-keeping anew, and bought bees in frame hives, which, however, had not been made by a practical bee-keeper, and were therefore wanting in uniformity and relative proportions between the frames and their respective hives. The surplus frames were also of a different size from that of the brood frames. Having to make new hives, I considered that I might sometime want to produce comb honey for sale, and the 1 lb. section would be the most preferable package in which to place this article in the market. At the same time I knew, that on account of insufficient shipping facilities, general difficulty of shipping comb honey and probable future preference for extracted honey, my product for the present would be principally the latter article. Not liking the regular Langstroth frame, on account of its shape and size, and inconvenience in hanging it right side up in the extractor, I decided on a frame which would hold 6 1 lb. sections, instead of 8, and which therefore would be alike adapted to comb and extracted honey. I mean, of course, that the frame for comb honey should be 2 inches wide, and used only to hold the sections, while the frame for extracting and brood combs would be $\frac{3}{8}$ of an inch wide, but the size in length and depth would be the same for both. The 1 lb. section is $4\frac{1}{4}$ inches square, outside measure. My frame made of $\frac{3}{8}$ inch stuff is $8\frac{1}{2} \times 12\frac{3}{4}$ inside, and $9\frac{1}{4} \times 13\frac{1}{4}$ inches, outside measure. The top bar is $15\frac{1}{4}$ inches long, and the side pieces ($8\frac{1}{2}$ inches), are nailed between the top and bottom bars. I do not use the triangular comb guide, which adds only more work and expense to the frame, with comparatively little additional strength, but make instead (unless I use comb foundation), a thin comb guide of wax, painted into the frame with a small

brush of feathers. This comb guide takes nothing away from the interior space of the frame, and I have never had the bees fail to follow it. I use $1\frac{1}{4}$ inch finishing nails for the frames; and have yet to see a frame come apart by ordinary careful handling.

My hive takes 10 of these frames, and is therefore 15 inches long from front to rear, $14\frac{1}{4}$ inches wide, and $10\frac{1}{8}$ inches deep, inside. It will be observed, that there is an extra $\frac{1}{8}$ of an inch in the depth, which I allow for shrinkage, after the hive is nailed together, and therefore make the space under the frames $\frac{1}{2}$ inch. The entrance is in one of the ends of the hive, parallel to the frames, and is $\frac{3}{8}$ of an inch high by 6 inches long. By arranging the entrance thus, I need only one division board to diminish the size of the hive for nuclei. Six-inch pieces of ordinary frame stuff are used to contract the entrances in winter, or for entirely closing them, when necessary. For convenience in moving, the bottoms are nailed on. A small board, 2 inches wide, six inches long in front and 11 inches behind, is nailed in front of the entrance, the nails going through the bevelled ends of the doorstep and driven only partly in, so that the doorstep can be easily taken off, when the hives are to be moved in a wagon. This hive has a capacity of 2,084 inches. It is otherwise made exactly like the style of Langstroth hive, introduced into Los Angeles county by Mr. John Beckley, and extensively used by beekeepers there. The upper story corresponds to the lower, and takes the same frame, but for extracting I use only 9 frames above. My hives rest upon four small blocks, cut from waste pieces of scantling, and placed directly upon the ground.

It will be seen, that this makes a very compact, nearly square hive, easily made, convenient to handle, and with a shape and size of frame, which suits all requirements. If a honey rack is used, the hive will hold 21 1 lb. sections in one tier, and another tier may be placed on top by clamping them together. If wide frames are preferred, the upper story will hold 7 of these, containing 42 sections, and a brood frame or division board, inserted to fill the 1 inch space, left in one end.

Now I would not advise anybody already having an established apiary of uniform and well made hives, or of any certain style, used to some extent in his neighborhood, to change from what he already has, unless the demand and price for comb honey in 1 lb. sections should become such as to justify him in going to the trouble and expense of such a change; or unless he sees some particular merit in my hive over the one he is at present using; but to anyone making a start in bee-keeping, and having no particular favorite among the hives already in use, I would recommend my hive for consideration, and I seriously think that it fills the bill for a hive, suited to this climate and to the various purposes for which it may be used, better than any other hive with which I have become ac-

quainted during my twelve years' experience in bee-keeping. I call it the "Three-Quarter Langstroth Hive," because the frames are three-fourths the size of the regular Langstroth, and it has already become the standard hive in this locality. No patent, gentlemen. Use it if you like, and criticise it, if you think it has any defects. Perhaps you can thereby help me to improve it in some particular, which I may have overlooked.

Independence, Cal.

For the American Bee Journal.

Light or Dark Colored Italians.

O. O. POPPLETON.

I see that the old question of the relative value of light and dark colored Italian bees is again occupying the attention of the BEE JOURNAL. I think this is an important question to practical bee-keepers, and worthy of full and free discussion.

I think it is now conceded by the most of bee-keepers that the Italians are not a strictly pure race, but have a slight admixture of the German bee. This is not admitted by all, but from what I can learn I judge that a large majority of our best bee-keepers believe such to be the fact. The admixture, if any there is, seems to have been so far back, that the traits of the mixed race have become quite firmly fixed, yet not so firmly but what there is some variation in both markings and traits of character between different strains of Italians that are all as undoubtedly pure as any we have. My experience is that those bees that most resemble in appearance and color the yellow race, also possess in a greater degree the traits of character that are peculiar to the Italians, and in this particular I agree with Mr. Heddon's latest writings, in which he says: "The dark Italians and hybrids possess some traits of the German bees, that the lighter Italians do not."

There are at least three traits that all writers on bee-culture agree the Italians possess in a greater degree than do our common bees. These are, 1st. Being lighter in color, the queen is more conspicuous on the combs, and therefore easier to be found, saving both time and labor in certain manipulations of the hive. This is of more practical importance than some think, especially in large apiaries where the bee-keeper has all the work he can do, and time is valuable. 2d. More inclined to defend their stores when attacked by robbers, or infested with moth worms. This trait needs no argument to prove its value, but I cannot say the difference in this is very marked between light and dark Italians. 3d. More inclined to cease other operations in the hive, and fill their brood combs with honey whenever the flowers are yielding largely. This is the most important trait of all.

I have of late years raised such a small amount of box or section honey, that I cannot say from experience whether they are less inclined to store honey outside of brood chamber

than are the black bees, but a large number of our best comb honey raisers say such is the fact.

As some are aware, I run my entire apiary for the production of extracted honey, and the kind of bees I want are those that will give me the largest amount of that kind of honey, and yet not be deficient in vigor, hardiness, or ease of handling. In this section flowers usually yield very copiously for a short time, then partially cease for a time, then give another large flow, and so on. During the season of 1879, white clover yielded good for about two weeks, then ceased almost altogether, and about the 20th of August buckwheat gave a large yield for a week or ten days only. During all the rest of the season, just enough honey was gathered to keep brood rearing going on nicely. Now, I think all can readily see that those colonies of bees stored by far the most honey that partially ceased brood rearing during these flows, and bent their whole energies to the storing of honey, and this rule of course works to a greater or less degree every season. Nearly all beekeepers desire to have their queens raise as largely as possible of brood during all times in the season, but I want queens that will be very prolific at all times during the season except during heavy flows of honey, and then have their progeny fill their combs with honey as quick as they can. It is my business to see that the combs are emptied often enough to allow her majesty a fair chance to perform her special duties. I have carefully observed this matter for years, and have no hesitation in saying that the colonies containing my extra prolific queens have not averaged so large a yield of honey as have those not raising so much brood.

As I have already said, the more my bees have shown by their color and markings their affinity to their yellow progenitors, the more thoroughly do they seem to possess those traits I have mentioned, especially the first and third ones.

Some make the claim that the yellow bees are not so hardy as are the dark or leather colored ones. Now, really, I don't like to be disrespectful toward anyone's opinion, but I really do think all such talk is simple bosh and hardly worth arguing.

I cannot say from experience how much truth there is in the claim of Messrs. Heddons and others that the German bees store more readily in sections than do Italians, but certainly do not doubt but such may be the fact, and can very readily see that for their purposes the dark Italians or hybrids might be much preferable. If their claims are correct, then it seems that the different management adopted by different bee-keepers is the real cause of so much difference of opinion among the most practical men we have in our ranks, as to the relative values of light and dark Italians.

I do not wonder at all that Mr. Buchanan, as well as others who have bred entirely for color and nothing else, made miserable failures. I only

wonder that they attribute their failure to their bees, instead of to themselves, where the blame really belongs. I think if a judicious breeder will select the best of his light colored colonies to breed from, he will not have to report a failure.

I see several lay a great deal of stress in having or going to build up a special strain of hybrids. Now, gentlemen, have you looked this matter over carefully in the light of experience gained by men in the breeding of other kinds of stock?

Their experience proves that it takes a great many generations, dozens at least, and very great care and judgment in selections, before a strain can be built up from two different breeds containing the best qualities of both, without the poorest of either, and those desirable qualities permanently fixed. In my humble opinion it would take at least half of an ordinary life time, and the use of a sure method of controlling fertilization, before a valuable fixed strain of hybrids can be obtained.

I make a special business of bee-keeping; everything else, even my farm, being side issues, and I several years ago decided that I could succeed better by confining myself to one branch of bee-keeping, letting all others alone. I have therefore devoted my entire attention to the production of extracted honey, and have steadily refused to be drawn into the queen rearing, bee-selling, or supply-dealing branches of the business. The opinions I have expressed are therefore those formed while engaged in the one branch of bee-keeping named.

Williamstown, Iowa, April 10, 1882.

For the American Bee Journal.

Chemical Properties Required in Soil.

A. R. KOHNKE.

On page 389, vol. 17, of the BEE JOURNAL, a German bee-keeper in the *Bienenwater* is giving his experience as to certain elements necessary in the soil, to cause plants to yield honey. Special mention is made of nitrogenous compounds and lime, but that buckwheat would yield an abundance of honey on rocky soil. But other agents may be present in such a soil, which are the main cause of a profuse honey flow, to discover which the bee-keeper who intends to plant for honey would have to experiment, to find out whether it does or does not pay. By the word "experiment," I mean for the bee-keeper to find out what fertilizer is wanted to give his own soil the quality of causing plants growing thereon to yield honey. M. G. Ville, a French experimenter, makes this statement in his fifth lecture: "If the agriculturist desires to restore sugar to his beet root, he must supply the soil with potassa." Potassa or potash in the most available form is found in wood ashes. If this plant food is absent, all the other agents present will not be of much avail. Experiments which I am about to make next summer will hold good only to soil at my disposal, which is a

rich, sandy loam, hence not conclusive for any other part of the country or even this county.

Now as to the question whether or not it will pay to raise plants especially for honey, depends altogether upon circumstances. In one of my late articles referring to a German writer, who thinks that it pays to raise them, instead of potatoes, I expressed my doubt as to its being a good investment, though a correspondent of the BEE JOURNAL makes me say the very opposite. Where land is worth from \$500 to \$1,000 per acre, as it is here, and the profits of market gardening are from \$300 to \$500 per acre, it would not pay. But lands worth from \$10 to \$30 per acre, which do not rent for more than \$1.00, or at most \$2.00, per acre, would pay better in honey plants. Some years ago I saw in the State of New York a field of potatoes, where two men had worked digging them a half a day; the proceeds were not quite a bushel; the owner abandoned the task of harvesting them. On the other hand, I have seen fields yielding 300 bushels per acre, selling at a dollar per bushel. Where it will pay under all circumstances, is in waste places, such as are not or cannot be cultivated; but, do not plant a little of everything and not much of anything; that is poor policy.

In gathering honey bees do not visit different kinds of flowers in one trip, but gather honey from one kind of flower only; if they are obliged to fly long distances to find them, they lose much valuable time in getting a load; if a bee-keeper wishes to try different kinds of honey plants, the seed of each kind should be scattered as near in one spot as possible; this will not only be an advantage to the bees, but to the bee-keeper to facilitate the observations he should make, to discover their value in his locality.

Youngstown, O.

For the American Bee Journal.

Bee-Keeping in Sweden.

T. G. STALHAMMAR.

In Sweden, last year was a very bad and trying one so far as concerned apiculture. No honey, but few swarms, and no possibility for them to build up or store honey for winter, except by giving foundation and using feeders. This I have been doing, and must feed every colony eight pounds of loaf sugar, at the entrance. Last winter (1880-81) was a very trying one for the bees as well as for mankind in this country, the thermometer sometimes showing 30° C. I saw a colony which took up its abode in a pillar or column, the cavity being one foot square, made of four boards 1½ inches thick, nailed together, airy and windy all along for 9 feet. It was covered up and downward, but insufficiently, the bees having easy access upward, as well as wind and rain. The bees had built their combs nice and straight 2½ feet long, which were well stored. Our examination was made in April, when the winter had passed, and they

were found in very good condition. After a month had passed they were destroyed by mice.

During the autumn of 1880 I purchased some late swarms in skeps, and had no opportunity to transfer them into hives. I gave them sufficient food, and as an experiment, cut off a *corda* (one twist) of the round bottom-board $1\frac{1}{2}$ inches high. My bees are wintered on the summer stand, but in some way or other protected. These colonies lived through. In hives with contracted entrances, but otherwise in fair condition, the bees were wet and died.

As an anomaly, I will mention that *Tilia Americana*, in the horticultural garden of this place, was in bloom as late as Sept. 14, last. Does it ever bloom so late in your country?

I am much pleased with the Weekly BEE JOURNAL. I expect and long for each number in advance. The contents are such that nobody can justly ask for better and more honest information, and for the future I will never be without it.

Gothenbourg, Sweden, Feb. 1, 1882.

[Mr. Stalhammar is editor of the *Swedish Bee Journal*, and his letter will be read with interest. We have never known *Tilia Americana* (linden or basswood) to bloom so late as Sept. 14.—Ep.]

For the American Bee Journal.

Bees' Tongue Register.

J. H. MARTIN.

In the spring of 1881 I obtained a few colonies of black bees from a neighbor, and when red clover came into bloom I observed black bees at work upon it, and but few Italians. I wanted some instrument to test accurately and quickly the tongues of those twenty colonies of black bees, and find if possible where those long-tongued fellows lived. I made a self-registering instrument with a float to operate the pointer upon a dial, but I could not depend upon it for accurate measurement, for every time I filled the reservoir I would get honey or syrup, the specific gravity of which would be different from that previously used, and my float would not give accurate readings on the dial. I did not make much use of my instrument upon which I had spent much time in experimenting, but still kept thinking I would like an accurate instrument for the purpose.

When our National Convention came off, I was interested in finding that Prof. Cook and Dr. Brown had been experimenting in the same line, and Dr. Brown seems to have made his float and dial work to his satisfaction, but he recorded only 32ds of an inch.

I then concluded to let Dr. Brown or Prof. Cook do the measuring of tongues and give us an instrument; but soon after the idea came to me with this question, why not let the bees take the honey from a tube, and afterward measure? I soon answered

the question with a practical instrument with which I could measure to a hair's breadth. I knew that bee-keepers would not be satisfied with 32ds, so I made my instrument to record by 100ths and one 400th or even higher, can be registered by reading between the inches. It will measure the tongue of any insect that will empty the tube to the depth of 1 inch. Here now is a chance for *Apis dorsata*.

To operate the instrument, turn back the corner upon which the wire-cloth is attached, fill the glass feeding tube there found with any sweet liquid the bees will take, give the bees access to it whose tongues you wish to test, until they remove all they can reach. Remove then, and sit upon a level place and uncover the tube, turn the thumb-screw upon the back of the instrument until the ring that encircles the tube is on a line with the extreme upper surface of the honey. The pointer will now register the length of tongue upon the dial in 100th parts of an inch.

Although it is early in the season in this locality to measure tongues (our bees being in the cellar yet), I have



tested a few, and find that they do not empty the tube so far by several 100ths as they do in the height of the honey season. I also find that the mesh of the wire-cloth makes some difference. It should be so as to let the mandibles through. I find 3-32 of an inch mesh gives the best results, and use that size.

Hartford, N. Y.

For the American Bee Journal.

Improvement in Italian Bees.

O. H. TOWNSEND.

Can they be improved? I answer, yes! Now the question, how? I will try to answer the question, endeavoring at the same time to give proofs which have been brought out by long experience. I having made bee-keeping a specialty for 17 years, and having had the Italians 14 years.

First, we must have a queen whose progeny is of good disposition, whose markings indicate absolute purity, which winter well, and last, but of the greatest importance, they must, as honey gatherers, have no rivals, not only in filling combs which are given them, but they must go into the

honey boxes with a "rush" as soon as there is honey in the flowers. If all queens are reared from such a queen, and reared with the proper care, no one can fail to see good results. There may be some queens which will be an improvement over their mother; when this is the case, then such should be used from which to rear our queens. If the foregoing directions are followed up for a few years, there will be a very marked improvement. Instead of having some colonies which will store in a season 200 lbs. surplus, some 100, and others little or none, they will show that there has been some care used on the part of the apiarist in his choice of queens from which to rear the young queens.

Until within the last few years any one might have come into my apiary and found, at the end of a good honey harvest, some hives with a good yield of box honey, others medium, and some with none, or perhaps with a very little; but since I have followed the above rules to the letter for the last 4 years, it is different, for now my bees will go into the boxes to work at about the same time. There is no more necessity for keeping poor bees than for the dairyman to keep poor cows. By the way, poor cows can be sold for beef, but it would not pay to sell poor queens, but kill them and supply good ones in their stead.

I bought my first Italian queen 14 years ago. Her bees were gentle, and good to store honey in finished combs, but very loth to work in boxes. I reared my queens from this queen and her progeny for 8 or 9 years, during which time I never succeeded in getting them (the bees) to work in boxes to my satisfaction. Four years ago I received my first imported queen. Her progeny were well marked Italians, rather dark in color, No. 1 bees to handle, more hardy than my first Italians, and good workers for both comb and extracted honey. After using over 100 of her queens, I found a few of her daughters were more profitable than their mother. In 1880 I bought two imported queens. The first one produced hybrids (I do not know whether she ever crossed the ocean or not). I only reared one queen from this one. Her progeny were noted for long stings, and a good knowledge of their use. The other was a young queen. It came direct to me from Italy. This queen, which I now have, is the best imported queen I have tried. Her bees are well marked (not light Italians), and good-natured. I never knew them to sting any one, and I never saw their equal to work in boxes. They stored and sealed 90 lbs. of honey last season, all from the first crop of red clover, and cast a very large swarm. I also took several full combs of hatching brood during May and the forepart of June. They are sure to have a large supply for winter in the body of the hive. Wintered out-of-doors last winter in a box with 3 inches of chaff, and did not fly for over 5 months, and came out in the best possible shape. As yet I have failed to get a queen to beat her except for size.

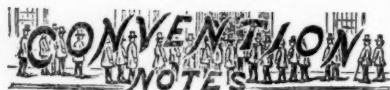
I am thoroughly satisfied that if all

the poor queens are weeded out, and good ones introduced from such stock as described above, thereby insuring good drones, then the reports from all our different colonies will be uniformly good.

I see that Mr. Henry Alley advocates the yellow drone theory; but I must say, since following the principles given above, my drones have lost their bands of yellow. When I had the most hybrids I had the most yellow drones. I do not wish to convey the idea that yellow drones are an indication of impurity, for I am well aware that we may breed for such drones with success, and yet keep our stock pure.

In regard to the new races of bees, I think that if we have our Italians bred up to a high standard of excellence, we had better be slow to introduce new blood into our apiaries. From past experience I say, good-bye hybrids.

Kalamazoo, Mich.



Local Convention Directory.

1882. *Time and Place of Meeting.*
 April 29—Muskingum Valley, at Berlin Center, O. Leonidas Carson, Sec., Frederick, O.
 May 2, 3—Eastern N. Y. Union, at Cobleskill, N. Y. C. Quackebush, Sec., Barnesville, N. Y.
 11—Champlain Valley, at Middlebury, Vt. T. Brookins, Sec., East Shoreham, Vt.
 16—N. W. Ill. and S. W. Wis., at Rock City, Ill. Jonathan Stewart, Sec., Rock City, Ill.
 25—Iowa Central, at Winterset, Iowa. Henry Wallace, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Saunders County, Neb., Convention.

The Saunders County Bee-Keepers' Association held their semi-annual meeting at Wahoo, Neb., April 1, 1882.

After the usual business had been transacted, the following subjects were discussed:

What is comb foundation, and how made? Can bees be fed too much early in the spring?

Spring dwindling, and how prevented.

Extracting honey and extractors. What plants to raise for bees to work on.

The Association decided to hold a special meeting about the middle of June, at some one of the apiaries near by. Considered a better place to discuss the subject of bees than in town.

The report given showed that of 82 colonies put in winter quarters, only 8 were lost, and only 5 by wintering.

The meeting then adjourned.

Mrs. C. L. STOCKING, Sec.

Michigan Farmer.

Eastern Michigan Convention.

The Eastern Michigan Bee-Keepers' Association held its second annual meeting in Detroit, April 11, President Pierce in the chair.

He delivered a brief congratulatory address, in which he commented upon the growth of the Society. One year ago it had been formed under discouraging circumstances; an unusually hard winter had just been passed through, and a majority of the bees in the country had been killed. This spring our bees are all in good condition, and the prospect good. The Society has increased in membership, having drawn to itself apiarists from distant parts of the State, and from Canada.

The subject of raising queens occupied a good deal of attention.

Messrs. W. Z. Hutchinson and J. H. Robertson, both extensive breeders, detailed their experience, and gave many valuable hints. The fact was brought out that as good queens can be produced by artificial stimulation, as those reared during a honey yield; also that the color of queens is in a measure decided by that of the honey upon which they are fed. The definition of a tested queen is one that produces three-banded workers. Mr. Robertson said that he is using some combs which are 25 years old, and finds them good still. For pasturage he prefers alsike clover and figwort. He purifies wax with salt or vinegar. Both these gentlemen use queen nurseries.

There was much interest taken in the honey market. Mr. Robertson sells his own honey, and last year he disposed of 20,000 pounds. He strongly advocated that honey producers deal as directly as possible with consumers. None of those present had ever known of honey being adulterated, and it was agreed that bee-keepers have no use for glucose. Mr. Hutchinson had tried feeding it to weak nuclei in summer, and he now believed that pure cane sugar is cheaper even at three times the price. Several members stored extracted honey in stone crocks and large tin cans, and kept them in a warm, dry place.

The following is from the question box: Which is the best sized frame for wintering?

Mr. Robertson believed that more depended on the bee-keeper than the frame; he commenced to prepare his bees for winter in the preceding June, and had them prepared for winter before it came. This season he had wintered 509 colonies out of 511, and had noticed that bees cannot go from one comb to another as easily as along the length of a comb.

What kind of bees are the best?

Most of those present believed that we would obtain the best results by careful breeding.

One member had tried the Syrians; he found them very good workers, also very cross.

It was agreed that Italians would protect themselves much better against moths than the blacks.

For winter packing, inside of the hive, the following substances were recommended in the order mentioned, fine, dry sawdust, planer shavings and oat chaff.

The meeting adjourned, to meet at the call of the Secretary, some time next October. A. B. WEED, Sec.

The Mahoning Valley Bee-Keepers' Association will meet at Town Hall in Berlin Center, Mahoning Co., Ohio, on Saturday, April 29th, 1882, at 1 p. m., sharp. All interested in the busy bee are invited.

LEONIDAS CARSON, Sec.

The Bee-Keepers of Virginia and Maryland are invited to meet at the Court House in Hagerstown, Md., on April 20, at 11 a. m., to organize an association. D. A. PIKE.

SELECTIONS FROM OUR LETTER BOX

Cool Yet.—The weather is cool here yet; I took my bees out of the cellar two weeks ago to-day; put in 45 last November, and took out 42 colonies alive, with about one-half in very fine condition, the balance thinly settled. 1. The three lost had no bees either dead or alive, can you assign a cause? They also had consumed more honey than those coming through all right. Nearly every colony has three to four frames of sealed and candied honey to spare. 2. How can I get it out.

D. H. HOPKINS.

Bear Lake, Mich., April 15, 1882.

[1. The three colonies mentioned were probably queenless, and the bees deserted and doubled in with other colonies. Sometimes when stronger colonies rob weaker ones, the bees being robbed go out with the robbers, or force an entrance to other colonies.

2. We would recommend to shave off the cappings and put the combs one at a time in the center of the brood nest. The bees will take out the honey, and liquefy and replace it in other combs. The following method is that adopted by Mrs. Harrison:

The honey was mashed up in a pan, and set over a kettle of boiling water, and stirred frequently. Before the honey was very hot, the wax had risen to the surface, and being set out in the cold, quickly congealed, so that the warm honey could be poured from under it through a coffee strainer into another vessel, leaving the wax in the pan. After the honey was melted, the wax was all melted up together, and considerable honey of inferior quality was under it, which can be kept separate and be used for cooking, making gingerbread, etc. The rinsings of vessels used in ma-

nipulating the honey, will make excellent vinegar. The wax can be melted in a pan over boiling water, and should be poured, when melted, through a hot coffee strainer, and when cool, will be of a light straw color.

Frost and Swarms.—This morning when I arose I thought of the frosty mornings of November. The ground was white with frost. About 10 o'clock I was in the apiary listening to the merry hum of the beautiful Italian bees, when, to my surprise, a swarm came rushing out of the hive as if some one had cried fire. As I clip all my queens' wings, of course I had no trouble in hiving them. I had the job about completed when the second came. I began to think I was employed for the day, if it was Sunday. The first swarm weighed 9 lbs., and the second 8 lbs. This sounds a great deal like a whopper, but it is true, nevertheless. I have a hive of Italian bees that are in good condition, plenty of brood, and the queen was hatched the 15th of June, 1881. They are not populous enough to swarm. They built a queen cell, and she hatched the 4th of April. They killed her immediately. To-day they have two more queen cells about ready to hatch. What is the matter? They are not ready to swarm; they have plenty of room yet. The queen is young and prolific. J. F. KIGHT.
Poseyville, Ind., April 16, 1882.

[The bees are determined to supersede the queen—why, you will have to ascertain from future observations.—Ed.]

Queen Feeding a Drone.—I have never seen a queen bee embrace a drone, but I have seen a queen feed a drone. I once was exhibiting bees at a fair, and for the purpose of giving more interest to my enterprise, I took the queen out of the hive and placed her with a drone in a small paper box covered with glass, so that they could be seen. I put a small bit of candy in the box, thinking they might want to eat. I was much surprised to see the queen suck the candy, and then go to the drone and go through all the motions that bees do in feeding one another. This she repeated several times. The drone soon died. They had not been in the box but a short time. We are having quite a cold spell here. Fruit must be greatly damaged. I never had bees winter better, and do better, than they are doing now. No sick bees this spring.
Waveland, Ind. ISAAC SHARP.

Loss About Ten per cent.—My bees have come through the winter very strong, with only the loss of one queen, and one drone-laying queen. I started in the winter with 15 colonies packed in chaff. Have to-day 13 in good condition, and two queenless. The loss in this neighborhood is about 10 per cent. We have had a favorable spring but to-day (April 10) is a cold, blustery day.
P. A. RIEGLE.
Arlington, O.

Prepared for Dividing.—Thinking you would perhaps like to hear from this region in regard to bees, I am at liberty to say my bees wintered unusually well, 5 colonies of Italians, and are now very strong. On last Saturday and Sunday (Easter) one colony in particular showed its strength in laying out, and I think it would have swarmed on Monday last, only that the weather on that day turned suddenly cold, and has remained so until now, which had the effect of keeping them very quiet. I had all my preparations made for dividing them, but the weather interfered. 1. Do you think this cold snap will injure the brood? 2. What is the significance of finding, in the morning, say from 20 to 50 little round caps of wax at or near the entrance, which look like cell cappings? 3. Do you think it would pay for me, only having a few colonies of bees, to invest in a honey extractor, when prices remain so high?

HERMAN KNIRIHM.
New Albany, Ind., April 15, 1882.

[1. Where colonies are somewhat weak, the late cold snap will be found to have done considerable damage.

2. The finding of the little wax caps signifies, generally, that bees are uncapping honey preparatory to carrying it to the center of the brood-nest. In other words, that they have been obliged to resort to their reserved stores.

3. If you purpose remaining in the business, you may find it economy to obtain an extractor, because an exigency might arise for its use.—Ed.]

Water! Water!—We in the Tiche country—east side—are under water, 3 to 20 arpents (arpent 192 feet) from the bayou. My father's place is 25 arpents, and the water from the bayou is under the house, and 20 feet above low water. Our bees are still 2 feet above water, $2\frac{1}{2}$ to reach hives. April 1st we extracted 12 lbs. from 1 hive; April 8th 15 lbs. from another, to give room. We have 20 with second stories all nearly full. We could extract 500 lbs. to-day from all. We have 5 that are about ready for second stories. Ten days ago a swarm of black bees came to us. We gave them a home and put them to work. An actual inspection of all colonies shows no queen cells started. We have a sad record for others of your subscribers. Mr. Garrett has lost by water 50 colonies—has 30 left. Mr. Henry Steckler is in water, 3 miles to land, and his 140 colonies are *queen sabe*, in the garret of his house. We think he is equal to the emergency. We cannot get any news of him. There is not enough cane left from the lands not overflowed to plant $\frac{1}{4}$ of the land (now planted and under water) next season. Forty arpents of corn and cotton planted and up, do not remain, and the water is rising in the bayou 2 inches in 24 hours. Back the water is at a stand to-day. Since 6 p. m., April 2d, the water has

risen 28 inches; April 1st, 11 inches; March 30 and 31, 11 and 13 inches respectively. You will know the extent of the disaster when I state the crop of cotton at 1,500 bales, sugar 1,700 hhds., molasses 2,000 bbls., in 1881. Worms follow overflow to cut down corn, worms eat the cotton, cane is killed. We are simply done for. Well, we are in a bad fix—sickness will play havoc, and run riot here this fall. My father's large practice here will be charity for a year to come, and losses—many due for four years—will be \$20,000. Well, we will bear it, and make our bees educate us; you will see if they do not do it!

J. W. K. SHAW.

Loreauville, La., April 9, 1882.

Not Very Plain.—In the BEE JOURNAL of April 12, page 226, you give directions for rearing queens, and say, when all is finished to shake the bees in front of the new hive, and place the frames in the hive removed (the black colony), then release the queen. Do you mean to release the queen in the new hive, or return her to the hive removed 4 or 5 rods distant? Please make this plain through the JOURNAL. I think I understand the rest. I have never tried to rear queens yet.
J. HAMBLBY.

Stirton, Ont.

[Return her to the hive removed (the black colony). The object in caging the queen is to have an absolute certainty that she does not get into the new hive on the old stand, and that is quickest guarded against by caging her.—Ed.]

Fruit Blossoms All Killed.—We had splendid weather from the first of April until the 10th inst. Peach, apple, cherry and pear trees were in bloom, and the bees had a good time and gathered pollen and honey in abundance; but on the night of the 11th the wind changed to the north, and was accompanied by a heavy snow storm. From that time up to date we had heavy frosts, killing all the bloom, and bees have had no fly up to date. The indications are that we will have a change by to-morrow. Bees are in good condition, however, full of brood and honey. We hope that we will have a good honey harvest this season, although the fruit bloom was killed. Our Association in Franklin County, Ind., will meet on the last Saturday in April, to adopt a constitution and by-laws, and I think we will make a grand success of it.

J. W. STURWOLD.

Haymond, Ind., April 17, 1882.

Jubilant.—To-day bees fly nicely, after some cold weather. I finished taking out my bees April 4, the last having been confined 5 months lacking a day. Out of 177 I have lost only 1, and that was put in weak and queenless. Throwing up hats is in order. Cherry blossoms killed, but we can feed at that time and apples will soon bloom.
C. C. MILLER.

Marengo, Ill., April 15, 1882.

The Golden Bee-Hive.—Bees in this neighborhood appear to be doing very well at this time. I examined one on the 22d of March, which had plenty of old sealed honey, with fresh honey and brood in all stages. 1. Can I feed extracted honey at any time to the bees, and have them store it without waste? 2. Will they take up extracted honey and store it in the boxes, when they are at work in the boxes above. I am afflicted with cataract on both eyes, so it is with difficulty I can see to read or write, hence I can be but a very poor bee-keeper. I think I will take my 15-year old boy with me, and try to use his eyes with my brains, so that between us both my pets may be taken care of the best I can. I keep but few, but I am loth to give them up, and will not as long as it can be helped. Just at this time this part of Alabama is blessed (or cursed) with a patent right bee-hive vender, selling rights to the people to make what he terms the "golden bee-hive." I have seen the hive and think it to be a sorry affair. Do you or any of your readers know anything about it? James B. Pickereil is the name of the vender. 4. Who is he?

W. E. FREEMAN.

Olustee Creek, Ala., April 13, 1882.

[1. Bees will not take up extracted honey and store it without considerable diminution.

2. In time of scarce honey flow, the bees will store extracted honey in the sections, where already at work in them; but in time of an abundant honey flow, they will look upon extracted honey with indifference.

3. The "golden bee-hive" was patented by David Thompson. We obtained from the Patent Office in Washington, in 1880, an official copy, from which we extract:

What I claim as new, and desire to secure by letters patent is: The combination, with the hive proper of the supplemental hive or box B, feed-board A, feed-cup C, and key and lever E, all arranged substantially as described and shown.

The patent does not cover the hive proper (brood chamber), nor the frames or division board. Mr. Thompson only claims the "combination" of his surplus arrangement with the hive proper. This arrangement consists of small frames of the same length of the brood frames, but about $\frac{1}{2}$ their depth; these hang by the top-bar, over the brood frames, and both the frames and their manner of hanging, together with their position on the hive, are all old, and have long been common property. The "combination" which Mr. Thompson claims is simply the attaching of his "supplemental hive, or surplus box, to "the hive proper," and he has no claim upon any movable frames, or any of

the desirable features of the ordinary hives, or upon division boards. His "feeder," "key" and "lever," are the main points in his patent, and these are, perhaps, of the least importance to bee-keepers.

4. We do not know Mr. James B. Pickereil.—ED.]

Planting for Honey.—You have raised such a tempest in my brain about planting for honey, that I resolved at once to set apart 20 acres adjoining my apiary for that purpose, and wrote to the editors of the *Kansas Bee-Keeper*, asking them to open the question, "Is planting for honey needed in Kansas; if so, what, how, and when shall we plant?" I expect a notice in the next issue. I shall not be able to plant the whole patch this year, but I would like to ask for the proportion of seeding for such a farm, on the supposition that my bees had no other resource—perhaps your pamphlet on planting answers my question. My land is a very fine, deep, rich, black loam, rectangular in form in the proportion of 4 to 9. Many thanks for the weekly visits of the *BEE JOURNAL*. I once heard an elderly gentleman advise a young man in the following words: "Go, and make yourself indispensable," were you there at the time?

Exeter, Kans. N. EMMERSON.

[We think you will find your question answered more satisfactorily in the pamphlet, "Bee Pasturage a Necessity," than we could do in a newspaper article.—ED.]

Grateful.—I am a bee-keeper in a small way, compared with some of our American apiarists, and depend a great deal on the *BEE JOURNAL* and its correspondents. I desire to return my thanks to Rev. A. Salisbury and Mr. G. M. Doolittle for many valuable suggestions. The latter just strikes me exactly. I like to read articles that come right out and tell me what to do—that is business. The Syrian bees are beauties, what I have seen of them, and I think ought not to be classed as ferocious. There are about five apiaries in our vicinity or the north half of our county (Douglas), all run for comb honey, except Mr. Salisbury's, which is partly run for honey and partly for queens. The five apiaries contain about 440 colonies, 70 of which are my own. These were wintered in a cave without loss. My yield in 1881 was about 50 lbs. of comb honey per colony, in prize sections, and thirty per cent. increase. They filled the brood chambers in the fall to the extent of crowding out the queens, and consequently they are weak this spring. I am going to adopt Mr. Doolittle's plan with them, and think I will have about 55 colonies when united for clover honey gathering. Next fall they will have better attention, as I have resolved to devote my whole time to the production of honey.

BARTLETT Z. SMITH.

Tuscola, Ill.

Honey Store-Room.—I have a two-story building 18x24 feet, and desire to use the upper story for a store-room, and the ground floor for workshop and room to keep comb honey in. The honey room is at the west end and is ceiled up on the inside, and has racks to place the honey on. The room has but one window, and blinds will be placed on the outside with wire screen and curtain on the inside. Which would be the best for the good keeping of the honey, a dry ground floor or a plank floor? There will be a board chimney 10x12 inches from the honey room, with a slide to open or close the same, so that when the sulphur fumes have been on the honey long enough they may be carried off as soon as possible, so as not to settle down on the honey and color the comb. The chimney may also be used as a ventilator. Please state in the *BEE JOURNAL* what you think of the above arrangement for keeping comb honey.

D. M. KETCHAM.

Arcadia, N. Y.

[If perfectly dry, we think we would prefer the ground floor, then with the chimney near the bottom for the escape of the sulphur fumes, your room will probably give satisfaction.—ED.]

Universally Cold.—I see by the *BEE JOURNAL* that most of our fraternity are having an early spring, and that bees are gathering pollen finely. Not so with me, however, for the spring has been universally cold. Vegetation has not started in the least as yet, and the past week has been one of cold and snow, the mercury going as low as 14°. It has been so cold I have been unable to dig plants except for about a week, making me late in filling orders, at which some of my Southern patrons feel disposed to growl a little. No pollen yet, and but very little brood in the hives. However, my colonies were never stronger in bees at this time of the year than now.

G. M. DOOLITTLE.

Borodino, N. Y., April 17, 1882.

Pollen.—It is supposed that bees feed their young ones on neither pollen or honey in the raw state, nor soften it, like pigeons do, for instance in the crop, and then feed; but that both pollen and honey are converted by them in chyle or milk, so to say, and then fed. Anyone who has tasted the stuff left in the queen cells will come to this conclusion. If, therefore, bees raise young ones in the spring without pollen, they do so at the cost of their own vitality, the same as animals live, which hibernate, but could never do it very long.

Terre Haute, Ind. T. HULMAN.

Bees Swarming.—Bees are in fine condition, and are swarming occasionally notwithstanding the cold wave which passed over our latitude during the past few days. The poplar, one of our chief honey-producing trees, is just coming into bloom.

S. D. McLEAN.

Columbia, Tenn., April 17, 1882.

Removing Queen Cells.—In your recent directions on queen rearing, dividing, etc., you say, "in 10 or 12 days from the removal of the queen, the queen cells may be cut out and used." In "Quinby's New Bee-Keeping" directions are given to remove the cells in the latter part of the ninth day, or the early part of the tenth day, from the removal of the queen—that if put off later a queen will likely emerge and destroy the other cells. Now if such a thing should occur, of course our object would be defeated. On the other hand, I understand we run some risk of injuring the queen if cut out too soon, besides, when we divide, as you recommend, by supplying a colony with a queen cell, or cause the colony to wait unnecessarily long for a laying queen. Please answer: 1. Where no special combs are furnished beforehand, what is the longest time we can safely wait after the removal of the queen, before cutting out the queen cells? 2. What age larvæ (dated from the laying of the eggs) do the bees prefer to use to rear queens? G. M. ALVES.

Henderson, Ky.

[1. Twelve days; and this will be governed by the progress made by the bees in ripening the cell. To determine this, an examination should be made previously.

2. From three to five or six days. Usually about four. We prefer, always, to watch the development of the cells closely, so as to let the young queens be as thoroughly developed and vigorous as possible before removing or handling the cells. The best queens we have had were those from cells removed but a few minutes before hatching.—ED.]

Plenty of Bloom.—We have plenty of bloom here, and bees are doing well. I want to know how to get the most honey, and hence I take the JOURNAL. JOHN ERWIN.

Louisville, Ill., April 19, 1882.

Clover Uninjured.—Bees are well—only one colony has perished; but, best of all, the clover is uninjured by the open winter. The honey prospect is fine for 1882, in Michigan.

T. F. BINGHAM.

Abronia, Mich., April 17, 1882.

Bees at the College.—The College bees are in splendid condition. I never knew bees to have so much brood at this time of the year, yet when I removed the bees from the cellar on the 1st of April, they had no brood, as there was no pollen in the hives. Bees here commenced to bring in pollen on April 1. This is five days earlier than any previous year. Possibly they would have brought it in earlier had they been able to fly. Our meeting last Thursday was very largely attended and was a great success. A. J. COOK.

Lansing, Mich., April 24, 1882.

Harmless.—I inclose an insect, and often see such around the hives. Do they do any harm to the bees?

A SUBSCRIBER.

Navarino, N. Y.

[We have often seen them around the hives, as well as on flowers, attracted no doubt by the smell of honey. After much observation, we cannot accuse them of any harm, intentional or otherwise.—ED.]

Cheerfulness Prevails.—The outlook for the California bee-keeper, up to Feb. 1, was indeed very gloomy, owing to the scarcity of rain. Since that date it has rained copiously, and the prospect for a good crop of honey, perhaps, was never better at this season of the year. Consequently, the faces of the bee-keepers have been transformed from a woe-begone expression to that of smiles and cheerfulness. You may prepare yourself for a good report from California this year, though let her crop of honey be what it may, we shall depend almost exclusively upon Europe for our market. There are parties here now making very liberal offers for the coming crop. J. E. PLEASANTS.

Anaheim, Cal., April 13, 1882.

Flowers on Every Side.—Bees are doing well here now, with some swarming going on. Poplar (tulip) is beginning to bloom, and raspberries will be due in a few days. I wish you could see our country now. All nature is green and fresh, with flowers on every side. W. J. WILLARD.

Jonesboro, Ill., April 17, 1882.

Cyprian Bees.—Having heard so much about Cyprian bees and their good qualities, I purchased a queen last season. I found them more gentle than the blacks, and better workers, but, when once disturbed, they are very hard to quiet down. All my black bees cannot rob them. On the 1st of April I made an artificial swarm by placing in an empty hive three frames of brood from the old one, then moving the old hive a good distance off and setting the new one in its place. By the 16th I took from it 15 queens and it swarmed once. I have left them 15 capped queen cells, hoping that they will swarm again. I think that they keep out moths better than the blacks. I expect to try the Italians next. D. R. KEYES.

Wewahitchka, Fla.

Bee-Pasturage.—Your pamphlet on this subject, Mr. Editor, is something which every bee-keeper needs. I have long been looking for such a work. I have planted different kinds of honey plants this season, and shall plant more in due time. We are having an early spring in Kansas. The fruit trees are in bloom, but the weather has been windy and cool, and we have had but few days when the bees could fly. The past winter was mild.

E. ZABEL.

Williamsburg, Kas., April 12, 1882.

Gnawing Off Combs.—I want to ask a question, and, of course, want an answer: I have one colony of bees, and know nothing of their habits. 1. I find that they are carrying out the comb; some frames are being nearly eaten off at the top. What makes them do so; and, 2. Is pure maple sugar good food for bees in spring? Bees have been gathering pollen for about ten days. SUBSCRIBER.

Fairchild, Wis., April 20, 1882.

[1. The combs are objectionable; we have known the bees frequently to gnaw off the cells of the combs when honey was candied very solid in them.

2. Yes, almost anything will do to feed in spring, when constantly flying, but, of course, good honey and sugar syrup are best.—ED.

Prospect of Honey Harvest.—My bees are stronger than I have ever had them at this season, before. I have had but one swarm yet and that was yesterday. I have been holding back my swarming for the raton honey harvest. Several of my neighbors' bees have swarmed, which has proved very disastrous, as a genuine "Norther" blew up on the 11th inst., and the weather continued wet and cold four or five days, chilling the brood in the parent hive, and severely damaging recent swarms. It is warmer now and the prospect is for a heavy honey yield the coming season.

WM. R. HOWARD.

Kingston, Texas, April 17, 1882.

Bee Stings.—The remedy for the third class of bee-keepers, mentioned by J. Anderson, whom the stings affect so seriously, is bromide of potassium. With me, the pain is cured instantly by rubbing honey over a large surface about the sting, but all the symptoms that he mentions follow, unless I have this remedy at hand; then I am ready for work again in 10 minutes. M. SIMONS.

Brockton, N. Y.

Wintered in Cellar.—I wintered my bees in a well ventilated cellar and lost 11 out of 58 colonies. Ten of them starved. J. F. POWELL.

Tracy, Minn., April 13, 1882.

Building Up.—My bees wintered without loss and are building up rapidly. W. H. MILLER.

Berrien Springs, Mich., April 14.

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

☞ When changing a postoffice address, mention the old as well as the new address.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published **WEEKLY** as follows, if the whole is paid in advance:

For 4 weeks.....	10 per cent. discount.
" 8 " (3 months)....	20 " "
" 13 " (6 months)....	30 " "
" 26 " (9 months)....	40 " "
" 39 " (1 year).....	50 " "

Discount, for 1 year, in the **MONTHLY** alone, **25 per cent.**, 6 months, **10 per cent.**, 3 months, **5 per cent.**

Discount, for 1 year, in the **SEMI-MONTHLY** alone, **40 per cent.**, 6 months, **20 per cent.**, 3 months, **10 per cent.**

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., Chicago, Ill.

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

A **Sample Copy** of the **Weekly BEE JOURNAL** will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The **BEE JOURNAL** is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employees, or some cause beyond our control.

Articles for publication must be written on a separate piece of paper from items of business.

For man it has no equal; for beasts it not excelled. What? Kendall's Spavin Cure. 14w4t

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 50
" 200 colonies (420 pages).....	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Binders for 1882.—We have had a lot of Emerson binders made especially for the **BEE JOURNAL** for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the **JOURNAL** as fast as received. They will be sent post paid by mail for 75 cents.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

To any one sending two *new* Weekly subscribers for a year, we will present a volume of the **BEE JOURNAL** for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for \$1.00, by sending for it *at once*, before they are all gone.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the **BEE JOURNAL**.

We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and **Weekly BEE JOURNAL** for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 17, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c. for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 18@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, \$25; for 2 lb. do., per gross, \$42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—All reports from the honey-producing districts in the southern part of the State are of the same tenor, viz.: that there will be a heavy yield this season. Bees are having an abundance of flowers, full of sweet nectar, and are gathering large quantities of honey and making brood comb. Our quotations are mainly nominal, as there is little doing at present.

We quote white comb, 18@18c.; dark to good, 10@14c. Extracted, choice to extra white, 8@9c.; dark and candied, 7c. **BEESWAX**—23@25c.

STEARNS & SMITH, 423 Front Street.

CLEVELAND.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c. A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Scarcely any demand reported for honey; prices weak and little more than nominal. We quote as follows: White comb, in small boxes, 15@17c.; dark, in small boxes, 11@12c. Extracted, white, 9@11c.; dark, 7@8c. **BEESWAX**—Western, pure, 24@25c.; Southern, pure, 23@24c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

Premiums.—Those who get up clubs for the **Weekly BEE JOURNAL** for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of 3,—a copy of "Bees and Honey."
" " 3,—an Emerson Binder for 1882.
" " 4,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " 5,—" " cloth.
" " 6,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Bees and Honey, or Management of an Apiary for Pleasure and Profit. This is the title of our new book. The first and second editions having been exhausted, and being desirous of having it "fully up with the times," including all the various improvements and inventions in this rapidly increasing pursuit, we have thoroughly revised it, re-writing some chapters and adding several new ones, in order to present the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth 75 cents; in paper covers 50 cents, post paid. The following is its Table of Contents:

Management of an Apiary—Continued.	
Shipping and Introducing Queens.....	85
Bee Dysentery.....	87
Foul Brood Disease.....	87
HONEY EXTRACTOR AND ITS USE.....	89
The Invention of the Extractor.....	89
When to Use the Extractor.....	92
How to Extract.....	93
COMB FOUNDATION AND ITS USE.....	95
Invention of Comb Foundation.....	97
Preserve the Wax.....	99
Comb Foundation Not Artificial.....	99
Fastening Foundation to Frames.....	100
BEE PASTURAGE A NECESSITY.....	103
Trees for Shade and Honey.....	104
Plants for Field and Roadside.....	108
Plants for Honey Exclusively.....	115
Honey Plants for Decoration.....	119
IMPROVEMENT IN BEES.....	131
The Bee of the Future.....	132
Lengthening the Bee's Tongue.....	133
HONEY AND BEE SHOWS.....	135
Exhibitions at Fairs.....	135
Effect of Bee and Honey Shows.....	138
THE WINTERING OF BEES.....	141
Chaff Packing for Winter.....	142
Preparing Cellar for Wintering.....	144
House for Wintering Bees.....	145
Wintering Bees in Clamps.....	146
GENERAL ADVICE TO BEGINNERS.....	147
General Information Necessary.....	147
Selecting a Location.....	147
Plan for an Apiary.....	148
Adopt a Standard Frame.....	149
Keep an Apiary Register.....	149
Increase by Division.....	152
Artificial Swarming.....	153
Preparing Feed.....	153
Guard Against Overstocking.....	154
Provide Continual Honey Bloom.....	154

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to new Recipes for Honey Medicines, and all kinds of cooking in which honey is used.

It is undeniable that pure honey is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will create a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, \$4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

4 RACES OF BEES. FREE TO ALL— 21ST ANNUAL CIRCULAR. HENRY ALLEY, Wenham, Mass. 17wtf

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address, S. D. McLEAN, Columbia, Tenn.

Italian and Cyprian Queens,

Imported and home-bred. Stock very superior. Also, hives of any of the leading patterns. State your wants and send for price list.

J. A. BUCHANAN, 17w2t Holliday's Cove, Hancock Co., W. Va.

Full Colonies of Italian Bees,

in the Langstroth frame, shipped in ONE-STORY SIMPLICITY HIVES, at \$7 each. 15wt R. I. BARBER, Bloomington, Ill.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880.....50c.
For Bee Journal of 1881.....85c.
For Bee Journal of 1882.....75c.

Address, THOMAS G. NEWMAN, 925 West Madison Street, Chicago, Ill.

Florida Land--640 Acres

CHEAP FOR CASH.

DESCRIPTION.—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahassee, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for \$3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for \$3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN, 925 West Madison Street, CHICAGO, ILL.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. Sells at Sight. Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich 36mlyp

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. THOMAS G. NEWMAN, 925 West Madison Street, Chicago, Ill.

NATURAL HISTORY OF BEES.....	PAGE.
Introduction.....	11
The Races of Bees.....	13
The Queen Bee.....	13
The Drone Bee.....	16
The Worker Bee.....	17
Brood.....	19
Production of Wax and Comb.....	20
Pollen, or Bee-Bread.....	24
Propolis, or Bee Glue.....	24
ESTABLISHMENT OF AN APIARY.....	25
Situation and Arrangement.....	25
Bee-Keeping a Science.....	25
Who Should Keep Bees.....	26
Suitable Location.....	26
Which Way Should Hives Face.....	28
When to Commence.....	28
How Many Colonies to begin with.....	28
Removing Bees.....	29
What Kind of Bees to Get.....	29
Buying Swarms.....	30
How to Care for a First Colony.....	30
Bees Kept on Shares.....	30
Bees Marking their Location.....	31
Changing the Location.....	31
Will Bees Injure Fruit?.....	32
Cleansing Combs of Dead Brood.....	33
Ants in the Apiary.....	34
Removing Propolis from Hands.....	34
HIVES AND SURPLUS RECEPTACLES.....	35
What Hive to Use.....	35
The Langstroth Hive.....	36
Production of Choice Honey.....	38
Single Comb Honey Sections.....	39
One-Piece Honey Sections.....	40
Cases for Holding Sections.....	40
Making Hives and Surplus Boxes.....	43
PRODUCTION AND CARE OF HONEY.....	45
Preparation for the Market.....	45
How Should Honey be Marketed.....	45
Assort and Grade the Honey.....	47
How to Get Bees out of Boxes.....	47
Management of Comb Honey.....	47
Honey in Unglazed Sections.....	49
Handling and Shipping.....	50
Candied Comb Honey.....	51
Management of Extracted Honey.....	51
Honey Must be Ripened.....	56
Metal Corners for Crates.....	57
Putting the Glass in the Sections.....	57
Honey as a Commercial Product.....	58
MANAGEMENT OF AN APIARY.....	59
Luck or Scientific Management.....	59
The Italian Bees.....	59
Italianizing the Apiary.....	60
Introducing a Queen.....	60
Inserting a Queen-Cell.....	62
Nucleus Colonies.....	64
Dividing the Colonies.....	65
Swarming; how to Control It.....	67
How to Hive a Swarm.....	69
The Loss of the Queen.....	69
What are Fertile Workers.....	71
Transferring from Box Hives.....	72
Transferring from Frame Hives.....	74
Uniting Weak Colonies.....	75
Clipping the Queen's Wings.....	75
Washing Out Drone Brood.....	75
Removing Bees from the Combs.....	75
Preparing Bees for Shipment.....	76
Uniting Colonies in the Spring.....	78
How to Separate Swarms.....	80
Robber Bees.....	80
Feeding Bees.....	80
Quieting and Handling Bees.....	82

Complete Apiary for Sale.

An Apiary of 90 COLONIES OF ITALIAN BEES, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasturage. These bees show a good record for last season—2,064 lbs. comb honey from 43 colonies, and increased to 100 colonies. They are in prime condition now, with

PROSPECTS OF A GOOD SEASON.

I want to go into other business this fall, and would sell now, giving the purchaser the benefit of this season's work (and my services if wanted), as an inducement to buy. Terms will be reasonable, and partly on time if necessary. Correspondence solicited.

H. W. ANDERSON,

17wtf Gibson's Station, Ind.

FINE ITALIANS.

75 Colonies for sale. If you wish bees for work, send for prices.

17w2tp SOUTARD & RANNEY, Kalamazoo, Mich.

ONE-PIECE SECTIONS a specialty. Pound size, \$4.50 per 1,000. L. Hives 50c. Also, Italian bees for \$5 per colony. Circular free. Semi 12tp BYRON WALKER & CO., Capac, Mich.

1882. - ITALIAN QUEENS. - 1882.



I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, \$1; Tested Queens, early in the season, \$2.50; after July, \$2; 2 frame Nucleus, with Tested Queen, \$4; Full Colony, with Tested Queen, \$10. The Best Quinby Smoker for \$1.50. Address all orders to L. J. DEHL.

(Money Order Office)—Butler, Dekalb Co., Ind. 10wtf

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly D. S. GIVEN & C., Hoopeston, Ill.

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,

15w6m 291 Sixteenth St., DENVER, COL.

CLOVER SEED

Owing to the increased demand for Melilot and Bokhara Clover seed, my liberal supply has been exhausted, and I can obtain no more in this country. I cannot, therefore, fill any more orders for either until the new crop comes in, and more can be imported.

Orders for Alsike and White Clovers will be filled promptly upon receipt.

A. H. NEWMAN,

16wtf 972 W. Madison Street, Chicago, Ill.

DON'T FAIL

To try the NEW DEANE SYSTEM this season. Only 50 cts. in stamps for a sample set, sent by express, at buyer's expense, or 30 cts. in stamps for exact dimensions of that and the Star Chaff Hive.

C. H. DEANE,

17wtf Mortonsville, Woodford Co., Ky.

DUNHAM COMB FOUNDATION—35c. per pound; extra thin and bright, 10 sq. ft. to the lb., 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13wtly



BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 24c. per pound, delivered here, Cash on arrival. Shipments solicited.

ALFRED H. NEWMAN,

923 West Madison Street, CHICAGO, ILL.

65 ENGRAVINGS.

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

923 West Madison Street, CHICAGO, ILL.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,

923 W. Madison, CHICAGO, ILL.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11wtf E. A. THOMAS & CO., Coleraine, Mass.

PAINE & LADD,

HALBERT E. PAINE,

Late Comm'r. Patents.

STORY B. LADD,

Solicitors of Patents and Attorneys in

WASHINGTON,

D. C.

Patent Cases.

16w3m

GOLDEN ITALIAN QUEENS.



1-frame Nucleus, with Tested Queen.....\$4.50
2-frame Nucleus, with Tested Queen.....5.00
Full Colony, with Tested Queen, before July 1.....12.00
Same, after July 1.....10.00
Tested Queen, before July 1, 3.00
" after July 1, 2.50
" " after July 1.....13.50
Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

QUEENS--QUEENS

Circulars free. Address, 15w6m JOS. M. BROOKS, Columbus, Ind.

NARMORE & WOOD,

NORTH LANSING, MICH.,

Manufacturers of

Bee Hives, All-in-one-piece Section Boxes, FANNING MILLS, SASH, DOORS & BLINDS. 13w13t Italian Bees for sale.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust or break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for \$2. Address,

BINGHAM & HETHERINGTON,

13wtf Abromia, Mich.

FLAT-BOTTOM

COMB FOUNDATION.



high side-walls, 4 to 16 square feet to the pound. Circular and samples free

J. VAN DEUSEN & SONS,

Sole Manufacturers,

Sprout Brook, Mont. Co., N. Y.



GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation," bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only \$1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch St., Boston. 22wtly

KNOW THYSELF

ITALIAN BEES AND QUEENS.

Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, OTTO KLEINOW,

13wtf Opposite Fort Wayne, Detroit, Mich.

Two Apiaries for Sale.

Having purchased the Apiaries of A. T. Williams, in which I was a partner, I now offer them for sale. These apiaries are now divided, one portion of 150 colonies, are in Illinois, about 50 miles from St. Louis, Mo., and the remaining 250 colonies about 6 miles from New Orleans, La. Both Apiaries are in good honey locations, and the bees are in fine order. The Apiaries are well stocked with supplies of all kinds, with 100 new hives made of cypress lumber, and ready for bees when they swarm. The bees are all

CYPRIONS AND ITALIANS.

All the hives are the Improved Quinby, and thoroughly painted. The bees here were brought last fall. My reason for selling: Engaged in other business and cannot attend to them.

I will take for them \$6.50 per colony net for all of them, or will sell in lots to suit purchasers for \$8 net. I have on hand two honey houses, one foot-power saw, two honey extractors, all kinds of tools for apian work, 16,000 sections (one-piece), 125 lbs. foundation, and all the hives supplied with section cases all tinned.

This is AN EXTRA BARGAIN for a party or parties to invest in an enterprise of this kind.

JOHN ENOCH,

15w4t Gretna P. O., La.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, \$3; Warranted Queens, \$2; Queens without guarantee, \$1; Two comb Nucleus, with Tested Queen, \$4. Orders filled in rotation, as received, if accompanied with the cash. 5w26t

Italian Bees for Sale.

I have for sale about 40 Colonies in 10 frame Langstroth hives. All are in prime condition, and have young queens. Will be delivered after April 20th. Price, for Italians, \$9; a few good Hybrids, \$1 less. Satisfaction guaranteed.

15w4t JOHN F. DIFMAN, Fremont, Ohio.

EXCELSIOR HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the \$16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the \$8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and moving sides in the Comb Baskets.

For 2 American frames, 13x13 inches.....	\$8 00
For 2 Langstroth " 10x18 "	8 00
For 3 " " 10x18 "	10 00
For 4 " " 10x18 "	14 00
For 2 frames of any size, 13x20 "	12 00
For 3 " " 12½x20 "	12 00
For 4 " " 13x20 "	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,

1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 2 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtlf

\$777 A YEAR and expenses to agents, outfit free, address **10 Vickery** Augusta, Maine. 36wly

J. V. CALDWELL,
CAMBRIDGE, ILL.,

FRESH MADE COMB FOUNDATION.
—On and after the 20th of this month, prices will be: Dunham, 10 to 50 lbs. 37c., over 50 lbs. 36c.; Vandervort, 1 to 10 lbs. 47c., over 10 lbs. 46c.

SAMPLES FREE; also circular of other supplies. 3wly

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, \$2.50; per half-dozen, \$13.50. Select Tested, \$3; per half-dozen, \$16. No "Dollars" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 2 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 2 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,

923 West Madison Street, CHICAGO, ILL.

"RED TAPE!"

Who will be the first to copy?
25,000 IN USE.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to \$2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.



Patented, 1878.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	\$1 75	\$2 00
Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch	1 25	1 50
Plain Bingham Smoker, 2 inch	1 00	1 25
Little Wonder Bingham Smoker, 1½ inch	50	65
Bingham & Hetherington Honey Knife, 2 inch	1 25	1 40

To sell again, apply for dozen or half-dozen rates.

Send for free description and testimonials, to
BINGHAM & HETHERINGTON,
17wtlf Abonia, Mich.

Bees and Queens

FULL COLONIES OF ITALIAN BEES,

From my Apiaries.

QUEENS AND NUCLEI IN SEASON.

Satisfaction guaranteed. Circular on application. 50wtlf
J. H. ROBERTSON,
Pewamo, Ionia Co., Mich.

BEES ON SHARES.

I desire to take about 10 strong colonies of Italian Bees to run on shares in the customary way, and invite correspondence to this end. I can care for them both in winter and summer, having a good place and pasturage. 16w2t
H. L. PENFIELD, Hunnewell, Mo.

THE KANSAS BEE-KEEPER,

Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address.

SCOVELL & ANDERSON,
28wtlf Columbus, Kansas.

Sixth Season DETROIT EVENING NEWS' EXCURSIONS

From Detroit to the Sea,
Via Grand Trunk R. R. and St. Lawrence River Steamers, through the THOUSAND ISLANDS and FAMOUS RAPIDS, to MONTREAL, WHITE MOUNTAINS, and SEA SHORE at PORTLAND, ME., near Boston; thence back to Detroit, via Quebec, Niagara Falls and Buffalo, will leave Detroit July 5, 20 & 27.

\$20.00 for the round trip of over 1,000 miles.

Special trains on the G. T. R. R., and special steamers on the St. Lawrence River.

Each tour personally conducted by W. H. BREAKLEY, of the DETROIT EVENING NEWS.

All tickets good to September 3d.

Send 2-cent stamp for circular.

A superb new illustrated Guide Book, with descriptions and information, over 40 maps engraved especially for this edition, and a perfect copy of an oil painting, in 16 colors, of Glen Ellis Falls (near Glen House) for the first page of cover, will be sent to any address for 50 cents. Address—**W. H. BREAKLEY, Office Detroit Evening News.**

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the State Agricultural College of Michigan.

320 Pages; 133 Fine Illustrations.

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

Read the following opinions of the Book:

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—*LEWIS T. COLBY*.

It appears to have cut the ground from under future book-makers.—*British Bee Journal*.

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—*J. P. WEST*.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—*E. H. WYNKOOP*.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—*A. E. WENZEL*.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—*WM. VAN ANTWERP*, N. D.

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record*.

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—*L'ABBE DU BOIS*, editor of the *Bulletin D'Apiculture*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *modicum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist*.

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowledge of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor*.

PRICE—Bound in cloth, \$1.25; in paper cover, \$1.00, by mail prepaid. Published by

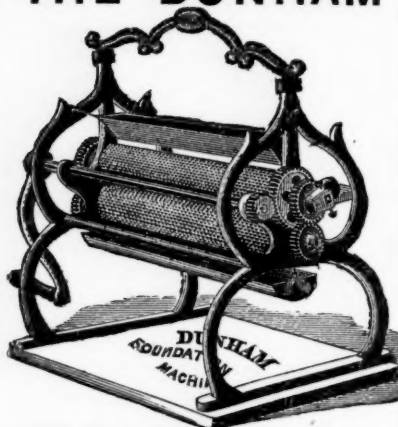
THOMAS G. NEWMAN,

974 West Madison Street, CHICAGO, ILL.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law.

FRANCES A. DUNHAM,
15am4t DePere, Wis.

Scribner's Lumber and Log Book.

NEARLY A MILLION SOLD. Most complete book of its kind ever published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States and Canada. Ask your bookseller for it. Sent for 35 cents post-paid.

G. W. FISHER, Box 238, Rochester, N. Y.

Also for sale at the BEE JOURNAL Office. 2w6m.

BASSWOOD SEEDLINGS

Four to eight inches, \$1.50 per 100; three to four feet, \$7.00 per 100. Address, Z. K. JEWETT, Nurseryman, Sparta, Wis.

6w13tp

PURE HOLY-LAND QUEENS.

I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, \$1.25 each; after that date, single Queen, \$1.00; 6 for \$5.00; 12 or more, 75 cents each; Warranted Queens, 25 cents more each. Tested Queens, \$2.50 each; Italian Queens, same price.

I. R. GOOD,

5w1y

Nappanee, Elkhart County, Ind.

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets, Langstroth Bee Hives, Honey Sections, etc., Apply to C. F. MUTH,

976 and 978 Central Ave., CINCINNATI, O.

Send 10c. for Practical Hints to Bee-Keepers. 1w1y

100 Colonies

FOR SALE. ALSO,

COMB FOUNDATION

And all Useful Supplies.

Circulars sent on receipt of address only, by

1w35t JAMES HEDDON, Dowagiac, Mich.

100 Colonies of Italian Bees for Sale,

IN SIMPLICITY HIVES.



list. Address,

5w1y Box 819, Belleville, St. Clair County, Ill.

Queens: Italian, Cyprian and Albino; Comb Foundation: Given, Vandervort, Dunham and Root; Hives, Smokers, Frames, Seeds of Honey Plants, and everything required in an apiary. Send for price E. T. FLANAGAN.

(Rose Hill Apiary).

5w1y Box 819, Belleville, St. Clair County, Ill.

Bee-Keepers' Supplies.

REMOVAL.

In order to accommodate my constantly increasing business, I have removed to more commodious quarters, one block east, and have doubled my capacity for executing orders. My address will hereafter be

923 west Madison Street, Chicago, Ill.

The new branch postoffice is within a few doors, which increases my mailing facilities, and expedites the execution of orders. The change of numbers will cause no delay, as we are in the same postal district, and being the largest patrons of this postoffice, are well known to its officers and employees.

For the convenience of my city customers I have put in a Telephone.

ALFRED H. NEWMAN,

923 West Madison Street, Chicago, Ill.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER, Box 238, Rochester, N. Y.

Also for sale at the BEE JOURNAL Office. 2w6m.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

"Low Prices, Quick Returns; Customers Never Defrauded."
Italian Queens....\$1; Tested....\$2
Cyprian Queens....\$1; Tested....\$2
Palestine Queens....\$1; Tested....\$2
Extra Queens, for swarming season, ready, if we are timely notified.



One-frame Nucleus, either Italian, Cyprian or Palestine, \$4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, \$8. Comb foundation on Dunham machine, 25 lbs. or over, \$5c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. Money Orders on Tuscola, Ill. 1w1y

Books for Bee-Keepers.

Sent by mail, postpaid, on receipt of price, by
THOMAS C. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—Entirely re-written, elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Quinby's New Bee-Keeping, by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—\$1.50.

Novice's ABC of Bee-Culture, by A. I. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00.

Langstroth on the Hive and Honey Bee—This is a standard scientific work. Price, \$2.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, 75c.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Third Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, 75c.; in paper covers, 50c., postpaid.

Bzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 6c.; per dozen, 50c.

Wintering Bees.—This contains the Prize Essay on this subject, read before the Centennial Bee-Keepers' Association. The Prize—\$25 in gold—was awarded to Prof. Cook's Essay, which is here given in full. Price, 10c.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price, 10c.

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Chas. C. F. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price 15c.

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and when and how. Illustrated with 26 engravings. Price, 10c.

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulterated food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages 50c.

Kendall's Horse Book.—No book could be more useful to horse owners. It has 35 engravings illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has recipes, a table of doses, and much valuable horse information. Paper, 25c.

Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, 25c.

Moore's Universal Assistant, and Commercial Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 Items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind.

The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, \$2.50.